

## HARM & RESIDUAL OF PYRETHROIDS

According to the latest statistics of the National Bureau of Statistics, China's annual use of pyrethroids is about 3,000 tons with a rapid up-trend. With their wide application in recent years, the problem of residues and harms has been gradually exposed.

### 1. Soil

Of the pyrethroid pesticides applied to the fields, only 1-2% takes effect on the target organisms, while the rest are scattered in the farmland soil or floating in the air. Field irrigation and natural rainfall make them deposit in deep soil, leading to soil pollution, or bring them down into the groundwater, rivers and lakes, causing a variety of water pollution. This is a big threat to human life.

### 2. Milk

After dairy cows are fed with contaminated feed, forage grass or water, pyrethroid pesticides will be transformed and accumulated in the dairy cows, so their residues can be detected in milk.

### 3. Tea, Vegetables and Fruits

Various pyrethroid pesticides are applied in the planting and growing of tea, vegetables and fruits to increase production and control pests. Due to environmental pollution and unregulated application, pesticide residues are often detected in tea, vegetables and fruits.

Recent studies have shown that pyrethroid pesticides are not low-toxic and safe as expected. Their residues in grains, vegetables and fruits will go directly into human body through diet. Besides, when spraying the pesticides, humans are exposed to them inevitably. Under natural conditions, pyrethroid pesticides are hard to degrade, while their long-term accumulation leads to accumulated toxicity, contributing to chronic diseases, neurotoxicity and reproductive toxicity.

Pyrethroid pesticides are also used as domestic insect repellents. In China, a variety of mosquito coils, electric mosquito mats, electric mosquito liquids and insect aerosol sprays are heavily used inside the room in summer, which increases humans' exposure to pyrethroid pesticides and potential health problems in turn.

To pregnant women and infants, who are in special physiological stage, pyrethroid pesticides are particularly hazardous, because they are more susceptible and less resistant to the harmful substance than ordinary adults. Some exposure to pyrethroid pesticides may not have effects on ordinary adults, but to fetuses and infants, the same exposure may cause severe developmental disorders. Once poisoned in fetus period, a crucial period of tissue and organ development, the effect will last a lifetime.

## HOW TO USE PYRETHROIDS PROPERLY

1. Purchase products of well-known brands. Check the certification number, pesticide registration number, product standard code and health license number. Check the expiration date on the package and the packaging integrity.

2. Seal all food, water and cupboards before spraying. Better to spray after dinner. Avoid contamination. Keep all pesticides out of reach of infants and children.

3. Take proper protective measures. Better to wear long-sleeved shirts and face masks to avoid skin and respiratory toxicity. Tilt 45 degrees to spray the insecticidal spray.

4. Do not over-use. Many people increase the doses to enhance the insecticidal effect; however, it is more likely to cause toxicity. If your family members or children feel dizzy and nauseating or have the symptoms of blurred vision, skin irritation, etc., leave the application area immediately. Send those with severe symptoms to hospital.

5. Avoid violent impact and high temperature environment, for insect aerosol sprays are in pressure packs. Do not spray to fire, for some products are using flammable organic solvents.

## HOW TO REDUCE PESTICIDE RESIDUES IN VEGETABLES AND FRUITS

1. Rinse vegetables and fruit with running water for a few minutes. Then soak in light salt brine or hot water (40 ° C) for 10 minutes. Cut after rinse.

2. Sunlight. Put vegetables under sunlight for 5 minutes. Most pyrethroid pesticides can be degraded in this way, reduced by about 60%.

3. High temperature heating can degrade pesticides. Rinse and boil some heat-resistant vegetables, such as cauliflower, beans, etc., for a few minutes. High temperature can remove 90% of pesticide residues.

4. Peel. Pesticide residues on vegetables (eg. cucumber and eggplant) and most fruits can be removed by peeling.